

Claims

What is claimed is:

- 1 1. An anchor for securing soft tissue to bone or to
2 soft tissue comprising:
3 an attachment means having a long axis and a head at a
4 first end of the long axis;
5 means to accommodate a securing or drive tool ; and
6 an anchor hole through the head, the anchor hole having
7 an upper aperture and a lower aperture, the anchor hole
8 oriented to cause a line through the center of the anchor
9 hole to intersect an extension of the long axis beyond the
10 head.
- 1 2. The anchor of claim 1 further comprising:
2 a shoulder displaced about the attachment means near
3 the head to provide a visual and tactile reference for
4 maintaining proper head height above the bone.
- 1 3. The anchor of claim 1 wherein the upper aperture
2 and lower aperture are chamfered.
- 1 4. The anchor of claim 3 wherein the chamfer extends
2 from 5 to 50 percent of the total length of an anchor hole.
- 1 5. The anchor of claim 1 further comprising:
2 a plurality of anchor holes disposed about the
3 circumference of the head.
- 1 6. The anchor of claim 1 wherein the anchor comprises
2 an inert material.
- 1 7. The anchor of claim 1 wherein the anchor comprises
2 plastic, stainless steel, titanium alloy or absorbable
3 material or a combination thereof.
- 1 8. The anchor of claim 1 wherein the attachment means
2 comprises a screw.

1 9. The anchor of claim 8 wherein the means to
2 accommodate a securing or drive tool comprises a drive
3 aperture on the head to accept a tool for imparting torque
4 to the anchor.

1 10. The anchor of claim 1 wherein the head is
2 generally conical having a vertex, an upper surface and a
3 lower surface, the vertex of the cone attached to the
4 attachment means with the primary axis of the cone collinear
5 with the long axis of the attachment means.

1 11. The anchor of claim 10 wherein the angle between
2 the lower surface and the long axis is between 90 and 150
3 degrees.

1 12. The anchor of claim 10 wherein the angle between
2 the anchor holes and the long axis is between 0 and 75
3 degrees.

1 13. The anchor of claim 10 wherein the angle between
2 the anchor holes and the long axis is between 35 and 50
3 degrees, and the chamfers are 45 degrees from a centerline
4 through each anchor hole.

1 14. A surgical anchor for reapproximating soft tissue
2 to bone or to soft tissue comprising:
3 a screw having a head, a shank and a threaded end;
4 a shoulder between the body and the shank to provide a
5 visual and tactile reference for proper head height above
6 the bone;
7 means to accommodate a securing or drive tool; and
8 a plurality of generally radial anchor holes disposed
9 about the circumference of the head and extending through
10 the head, each anchor hole describing an angle between 0 and
11 75 degrees from the shank to a line through the anchor hole.

1 15. The anchor of claim 14 wherein the anchor
2 comprises an inert material.

1 16. The anchor of claim 14 wherein the anchor
2 comprises plastic, stainless steel, titanium alloy or
3 absorbable material or a combination thereof.

1 17. The anchor of claim 14 wherein the anchor holes
2 are skewed about the long axis of the body.

1 18. The anchor of claim 14 wherein the plurality of
2 anchor holes further comprise apertures that are chamfered
3 with a chamfer extending from 5 to 50 percent of the total
4 length of an anchor hole.

1 19. The anchor of claim 14 wherein the head is an
2 inverted cone having a generally flat upper surface and a
3 sloping lower surface describing an angle between 90 and 150
4 degrees from the surface of the shank.

1 20. The anchor of claim 14 wherein the means to
2 accommodate a securing or drive tool comprises a drive
3 aperture on the head to accept a tool for imparting torque
4 to the anchor.

1 21. An anchor for securing soft tissue to bone or to
2 soft tissue comprising:
3 an attachment means having a long axis and a head at a
4 first end of the long axis;
5 means to accommodate a securing or drive tool; and
6 an anchor hole through the head, the anchor hole having
7 an upper aperture and a lower aperture, the anchor hole
8 oriented to cause a line through the center of the anchor
9 hole to be skew to the long axis.

1 22. The anchor of claim 21 further comprising:
2 a shoulder displaced about the attachment means near
3 the head to provide a visual and tactile reference for
4 maintaining proper head height above the bone.

1 23. The anchor of claim 21 wherein the upper aperture

2 and lower aperture are chamfered.

1 24. The anchor of claim 23 wherein the chamfer extends
2 from 5 to 50 percent of the total length of an anchor hole.

1 25. The anchor of claim 21 further comprising:
2 a plurality of anchor holes disposed about the
3 circumference of the head.

1 26. The anchor of claim 21 wherein the anchor holes
2 are in a plane perpendicular to the long axis.

1 27. The anchor of claim 21 wherein the attachment
2 means comprises a screw.

1 28. The anchor of claim 27 wherein the means to
2 accommodate a securing or drive tool comprises a drive
3 aperture on the head to accept a tool for imparting torque
4 to the anchor.

1 29. The anchor of claim 21 wherein the anchor
2 comprises an inert material.

1 30. The anchor of claim 21 wherein the anchor
2 comprises plastic, stainless steel, titanium alloy or
3 absorbable material or a combination thereof.

1 31. The anchor of claim 21 wherein the head is
2 generally conical having a vertex, an upper surface and a
3 lower surface, the vertex of the cone attached to the
4 attachment means with the primary axis of the cone collinear
5 with the long axis of the attachment means.

1 32. The anchor of claim 31 wherein the angle between
2 the lower surface and the long axis is between 90 and 150
3 degrees.

1 33. The anchor of claim 31 wherein the angle between
2 the anchor holes and the long axis is between 0 and 75

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3 degrees.

1 34. The anchor of claim 31 wherein the angle between
2 the anchor holes and the long axis is between 35 and 50
3 degrees, and the chamfers are 45 degrees from a centerline
4 through each anchor hole.